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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,518	12/14/2001	Nicholas E. Bratt	6580-61415	8701

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EXAMINER

ASSAF, FAYEZ G

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,518

Applicant(s)

BRATT ET AL.

Examiner

Fayez G. Assaf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
4a) Of the above claim(s) 10-24 and 31-33 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 and 25-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/2/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

Applicant constructively elected claims 1-9, 19-22 and 25-33 for prosecution, and requested a clarification with respect to the Restriction requirement mailed 10/2/03. In a phone interview with Applicant on 4/5/04, the Examiner and Applicant discussed the restriction requirement and agreed on modifying the Restriction requirement to include two groups and two species as explained next.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9, 19-22 and 25-33, drawn to optical transceivers having holographic element and methods of transceiving the optical signals thereof, classified in class 359, subclass 15.
- II. Claims 23 and 24, drawn to optical mounts, classified in class 359, subclass 871.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown

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to be separately usable. In the instant case, invention II has separate utility such as in a combination not requiring an optical transceiver. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention:

Group I:

Species 1: optical transceivers having holographic element and methods of transceiving the optical signals thereof: claims 1-9 and 25-30.

Species 2: adjustable optical transceivers having holographic element and methods of transceiving the optical signals thereof: claims 19-22 and 31-33.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the

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claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim appears to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or

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admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Michael Jones on 4/5/04 a provisional election was made without traverse to prosecute the invention of Group I: Species 1, claims 1-9 and 25-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-22 and 31-33 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9, 25, 26 and 28 are rejected under 35

U.S.C. 102(b) as being anticipated by Asghari (PCT WO 99/34539.)

Regarding claims 1, 8, 25, 26 and 28, Asghari discloses an optical transceiver, comprising: a diffractive optical element (12 of Fig. 2); and an optical support (1 of Fig. 2) having at least a first surface or focusing surface (top mirror 11 of Fig. 2) and a second surface or coupling surface (surface connecting element 3 of Fig. 2), wherein the DOE is configured to direct at least a portion of an optical signal to the first surface and wherein the first surface has a curvature configured to converge the portion of the optical signal and direct the converged portion to the second surface (see Fig. 2.)

Regarding claims 2, Asghari discloses the optical support including a third surface (the etched surface supporting 4A of Fig. 1) and the DOE is attached to the third surface.

Regarding claims 3, 4, 6, 7, 20 and 29, Asghari discloses the DOE being a transmission hologram (4 of Fig. 1) or a reflection hologram (12 of Fig. 2, line 8 to line 11 of Page 3) for a range of selected wavelengths.

Regarding claim 9, Asghari discloses the diffractive optical element being situated at a second coupling surface of

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the optical support (the etched surface supporting 4A of Fig. 1.)

Regarding claim 5, the recitation with respect to the critical angle is interpreted as being any angle below which the optical signal is not properly diffracted to the optical output.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asghari.

Asghari discloses the claimed invention except for explicit teaching with regard to the curved surface corresponding to a section of a parabola.

However, such parabolic reflectors are well known in optical communication systems.

It would have been obvious, at the time was made, to a person having ordinary skill in the art to provide the

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reflectors (11's of Fig. 2) with a parabolic surface so as to simplify alignment of optical elements, i.e. signals parallel to the axis of rotation of the mirrors will reflect to the focus where the DOE is situated.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jannson et al. (US 4,838,630)

Houde-Walter (WO 02/17516 A2)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fayez G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

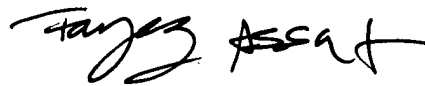
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fayez G. Assaf
Examiner
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A handwritten signature in black ink, appearing to read 'Fayez Assaf', written in a cursive style.

FA
4/5/04